Discovered! Secret Recipe For Growing Pheasants

By Chet Hart

Two years ago I wrote a cautiously optimist article in **Tracks** regarding the future of pheasants in our state. Concern has been raised due to the considerable decline, and almost complete disappearance in some areas, of ringnecks from California's croplands following the onset of very clean and intensive farming practices.

The optimism came from what we had learned in the last 10 or 15 years about managing these desirable birds under California's unique conditions. The caution at that time was because we had just begun to evaluate a new management concept on Grizzly Island Wildlife Area, in the Suisun Marsh of the western Delta.

The management concept consists primarily of developing and managing essential habitat elements on fairly small areas not being actively farmed. These areas are descriptively termed Diversified Upland Habitat Units (DUHUs). The method is simple, consisting essentially of discing a small percentage of the DUHU in narrow strips in the fall, and later applying water to part of the strips. No planting is prescribed, just working with existing native or naturalized plants.

"...the population desnity of pheasants is the highest recorded to date."

To evaluate the effectiveness of the management concept at Grizzly Island, we compared the quality of the managed DUHU with similar but essentially unmanaged areas in the same general location. (This three-year study will be completed at the end of the year and reported on in more detail by Chad Fien, Grizzly Island WA wildlife biologist.

The results of recent productivity surveys have been dra-

Photo © Chad Fien

Grizzly Island rooster with his breeding season wattles (red face).

Photos © Chet Hart

After discing, the field is flooded to encourage the growth of broadleaf "weeds" – an essential food source for a good insect crop (left). Standing water keeps bug population at high levels, ensuring a continual high protein diet for growing chicks. The sparse vegetation provides essential cover for chicks without hindering movement (right).

matic and decisive. After three breeding seasons, the population density of pheasants in the Grizzly Island DUHU is the highest recorded to date by California DFG—an average of two pheasants per acre. This, in itself, is a record but is only a minimum figure. We believe the actual numbers are appreciably greater, possibly on the order of three or four birds per acre. For pheasants, one-half a bird per acre is considered a dense population. The greatest pheasant density ever officially recorded in North America, or perhaps the world, was about five birds per acre on Pelee Island in Lake Ontario in the 1950s.

The main factor contributing to these large numbers of pheasants was excellent survival of chicks and juveniles, again certainly at record levels for California and possibly elsewhere. Based on "flushing counts" taken at about the age broods are breaking up and the young are becoming independent (eight to 12 weeks of age), seven to eight juveniles per hen have been recorded in the DUHU in both of the last two years. This is close to double the number that has been considered good survival in the past. Such high survival leads to explosive population growth.

The high chick survival is attributed to the part of DUHU management that provided good and readily available food supplies for young pheasants, particularly those newly-hatched. For their first several weeks these chicks live almost entirely on arthropods (bugs). DUHUs have brood cover strips managed for the right cover and moisture conditions to produce abundant supplies of this chick food. No doubt this is the main "secret" to DUHU management producing so many pheasants.

"...this high chick survival has been achieved with no predator control."

This high chick survival has been achieved with no predator control. Perhaps more important is that a coyote den was located near the center of the DUHU and coyotes were observed in the study area, with evident NO evident adverse effect.

In stark contrast to the DUHU results over these three breeding seasons, there is no evidence of the local population increasing in the Comparison Area – it more probably has declined. The status and productivity of this population has been difficult to quantify simply because there are so few birds in it now. For example, in the recent counts when 201 pheasants were recorded in the DUHU, only nine birds (all juveniles) were found by making similar surveys in the Comparison Area. In such circumstances, sophisticated analytical or evaluation methods just don't work. That is when common sense and logic have to come to the fore. Despite the potential for sampling errors, when similar sampling surveys record 22 times as many pheasants in the DUHU area, it obviously has many more pheasants, and we understand why.

There is no doubt that the Comparison Area population is low for the same reason that the 2002 hunting season bags

Photo © Chad Fien

Newly hatched nest.

Photo © Chet Hart

Holes eaten in fathen leaves indicate the presence of lots of bugs – an essential food for phesant chicks..

of wild roosters on Gray Lodge, Los Banos, Mendota, and the Salt Slough unit of the Department's Wildlife Areas were at record lows. Three consecutive dry springs causing poor chick survival evidently had pheasant populations there at all time low levels. In contrast, apparently due to DUHU management influence, the overall bag of wild roosters on Grizzly Island increased about 53 percent. This year all of these WAs except Gray Lodge have started testing the DUHU management concept.

It is evident now that surprisingly large numbers of pheasants and other wildlife can be produced from carefully planned and executed management on suitable, relatively small areas. This opens new horizons for more productive upland management on State and Federal wildlife areas and a wide variety of private lands similarly dedicated to wildlife and related recreation, such as duck clubs. It is now apparent that essentially any individual or group that controls a suitable parcel of land, and has adequate resources, can enjoy a local population of wild pheasants.

This has been successfully demonstrated now on Grizzly Island and in different circumstances on the private M&T Ranch in the Sacramento Valley near Chico. In 2003-2004, approximately 25 new areas are preparing to give the method a try. These will include varying conditions from semi-desert in the southern San Joaquin Valley to the more severe winters of the Klamath Basin at the Oregon border, and several locations in Oregon. A number of these will be in cooperation with Pheasants Forever chapters.

"Anyone with a suitable parcel of land, and adequate resources, can enjoy a local population of pheasants."

It is highly important to point out that this is not single purpose management; pheasants serve as an indicator species. Studies overseen by Bob Allen, a wildlife biologist in the DFG's San Joaquin Valley - Southern Sierra Region, have shown that there was greater diversity of avian species, including grassland songbirds, as well as numbers of nongame bird territories, in DUHU managed areas during the spring nesting season. Steve Brueggemann, manager of the DFG's Mendota Wildlife Area, also has reported that in the first year of a DUHU on that area, it was used significantly and productively for duck nesting. The duck trap capture rate there for banding was twice as high as the average for the rest of the area. Also, black-necked stilts used the new brood strips for nesting.

Chet Hart's experience as a pheasant researcher spans well over 50 years. He began his pheasant research activities in 1947 while finishing college, handling research projects for the Utah Cooperative Wildlife Research Unit. In 1949 he came to work for the DFG, known at that time as the Division of Fish and Game, to work on a pheasant research project.